

The diagram illustrates the architecture of an Advanced MIS Server (12). It shows the following components and data flows:

- Data Sources:**
 - Operational Data:** Represented by three cylinders, it feeds into the Advanced MIS Database.
 - Enterprise Data Warehouse, or other Datamarts:** A large cylinder that also feeds into the Advanced MIS Database.
- Advanced MIS Server (12):** A central box containing the **Advanced MIS Database**.
- User Interfaces and Connections:**
 - CLAP Users:** A computer terminal connected to the server via **ODBC**.
 - Users:** A desktop computer system connected to the server via **WEB**.
 - Printed Reports:** A printer icon connected to the server.
 - Reports Delivered Via Email:** An email client icon connected to the server.
- Output:** Arrows from the CLAP Users and Users point to a list of outputs: **Canned Reports, Ad Hoc Queries, Etc.**

Fig. 1

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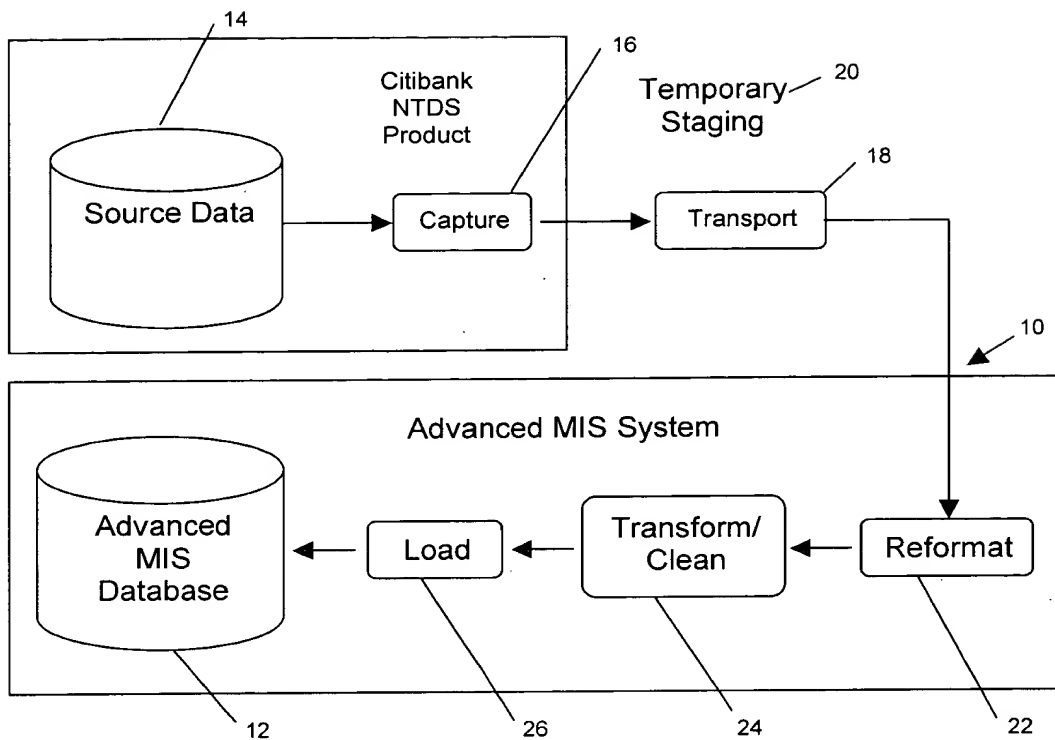


Fig. 2

SAMPLE REPORT TYPES

Overall Summary Session	— 28
Statistics Summary	— 30
Functional Usage Summary	— 32
Payment/Transfer Activity Summary	— 34
Functional Activity Type Reports	— 36

Fig. 3

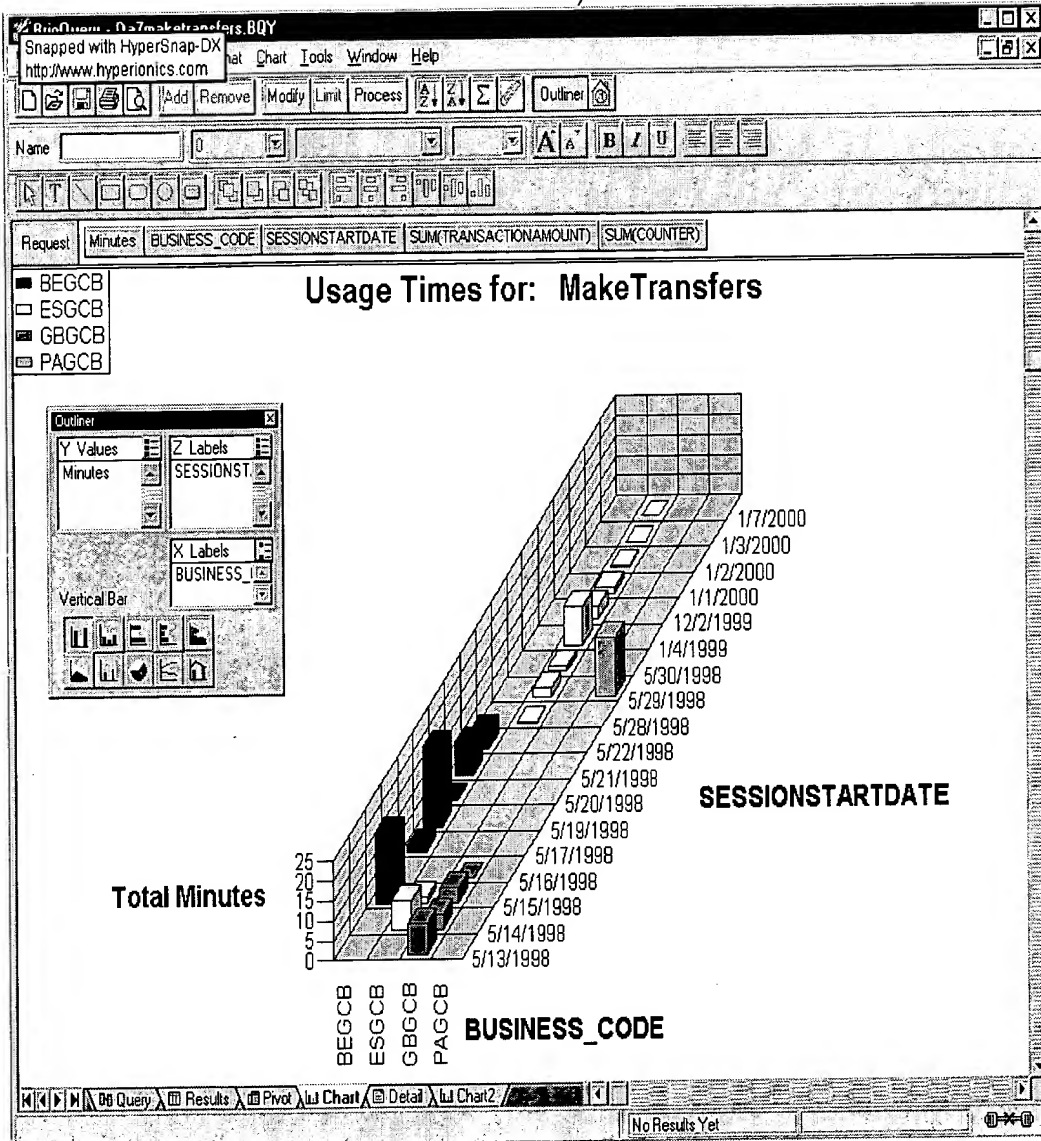


Fig. 4

The flowchart illustrates the Data Audit Process, showing the flow of data and processing steps:

- ActivityLog.Mdb** (40) feeds into **VB Classes** (66).
- DA7.1 TJ Logs** (42, 43) feeds into **TJFormat.EXE** (44).
- VB Classes** (66) also feeds into **TJFormat.EXE** (44).
- TJFormat.EXE** (44) outputs to **Session Log File** (46).
- Session Log File** (46) feeds into **DAKeyGen.EXE** (48).
- DAKeyGen.EXE** (48) outputs to **TJ Function Codes** (50).
- TJ Function Codes** (50) feeds into **Keyed-TJ Function Codes With Transaction Time Information** (52).
- Keyed-TJ Function Codes With Transaction Time Information** (52) feeds into **Audit** (56).
- Audit** (56) outputs to **Audit Record** (60).
- Audit Record** (60) feeds into **Audit Records Loaded Last** (62).
- Audit Records Loaded Last** (62) feeds into **Session Records Are Loaded First** (54).
- Session Records Are Loaded First** (54) feeds into **Audit** (58).
- Audit** (58) outputs to **Audit Record** (58).
- Audit Record** (58) feeds into **Audit Records loaded last** (64).
- Audit Records loaded last** (64) feeds into **Data Warehouse** (12).
- Data Warehouse** (12) feeds into **Function Codes Loaded Second** (66).
- Function Codes Loaded Second** (66) feeds into **Audit** (56).
- This Program** (70) feeds into **Keyed-Session Log File** (50).
- Keyed-Session Log File** (50) feeds into **Audit** (54).
- Audit** (54) outputs to **Audit Record** (58).

Fig. 5

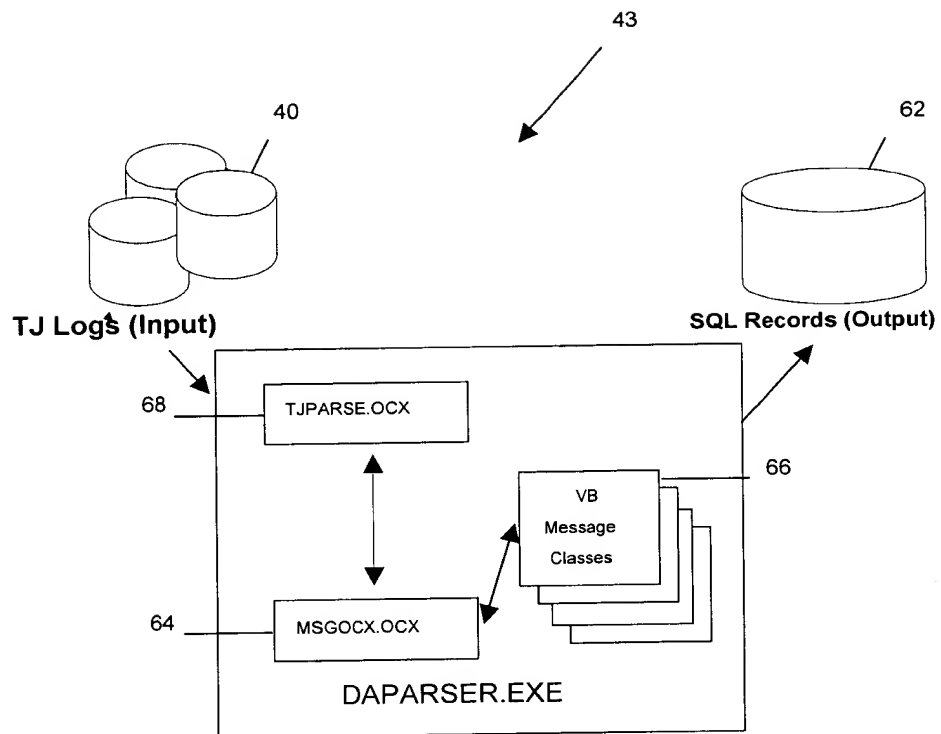


Fig. 6

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TJRead

FileName:

File Offset: 73

Message Function Code: 32610

Description	Value
UHCLogHdr_ActionCode	
UHCLogHdr_CardClass	
UHCLogHdr_CardNumber	
UHCLogHdr_CompleteCode	
UHCLogHdr_DateTime	893952921
UHCLogHdr_LogonResponseCode	
UHCLogHdr_RecordID	
UHCLogHdr_RecordType	95
UHCLogHdr_ServerInstanceNumb	02
UHCLogHdr_ServerTTYNumber	
UHCLogHdr_SessionDateTime	0000000000000000
UHCLogHdr_SessionID	1031
UHCLogHdr_SesStartDateTime	
UHCLogHdr_TerminalID	3000

76

72

74

70

Fig. 7

S1

S2

S3

S4

\$5

Fig. 8

API EXAMPLES

Initialization	78
Isolating the Next TJ Message	80
Returning the TJ Message Log Buffer Address	82
Open ELF Output File	84
Write ELF Output File	86
Close ELF Output File	88

Fig. 9

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Fig. 10

09736760-121300

EXAMPLES OF HOME BANKING
SYSTEM USER CATEGORIES

Continuously Active User	100
First Time Active User	102
Resumed Active User	104
One Month Inactive User	106
Two Month Inactive User	108
No Longer Active User	110

Fig. 11

EXAMPLES OF FINANCIAL TRANSACTIONS

Trans Code	Function Description
007	Make an Internal Transfer
015	Set Up Recurring Transfer
016	Change Recurring Transfer
017	Cancel Recurring Transfer
019	Make an External Transfer
023	Make a One-Time Payment
045	Cancel Future-dated Transfer
046	Set Up Recurring Payment/Standing Order
256	Change Recurring Payment/Standing Order
048	Cancel Recurring Payment/Standing Order
060	Cancel a Direct Debit
061	Inter-Citi Transfer (local)
062	Inter-Citi Transfer
065	Cancel an External Transfer
220	Send Global Cash
222	Cancel Global Cash
224	Cross-Border External Transfers
226	Change Future-dated Transfer
259	Cancel a One-Time Payment
260	Change an External Transfer
261	Change a One-Time Payment
xxx	Buy/Sell Mutual Funds
xxx	Express Payment

Fig. 12

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SAMPLE STANDARD REPORTS

Session Summary Report	112
Usage Comparison Report	114
Functions Summary Report	116
Customer Activation/Usage Report	118
Session Completion Details Report	120
Error Reports	122
Functions Detail Reports	124

Fig. 15

[illegible]114

112

Fig. 16

(Weekly would be replaced by Monthly for the Monthly report)

	148 Attempts	150 % of All Attempts	152 Successful Completions	154 % of All Successful Completions	156 Users	158 % of All Users	160 % of Sessions with Function	162 Transaction Time - Avg (minutes)
142 — Account Information								
Account Details								
Account Activity								
Relationship Summary								
Download Account Activity								
164 — Subtotal								
144 — Payment/External Transfers								
Make an External Transfer								
Make a One-Time Payment								
166 — Grand Totals								

116

Fig. 18

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Function Group	Function Code	MIS target information	Banking /
Activity Logging		Used to describe activity logging functions	
ActivityDownloadLogRecord	32004	Describes User download from Bank	N
ChangePINLogRecord	32021	Pin Information modification	N
GetAccountActivityLogRecord	32003	Authorizer response & product type	N
GetAccountStatusLogRecord	32002	Relationship issuer information	N
LogonLogRecord	32000	Session attempts and server "hits"	N
MessageCenterLogRecord	32023	User notes & feedback	N
OrderChecksEtcLogRecord	32022	Relationship issuer information	N
ProfileResultLogRecord	32024	Authorizer Information	N
RelationshipSummaryLogRecord	32001	Relationship issuer information	N
Transfers		Teller-less transfer activity	
MakeInterCitiTransferLogRecord	32006	Currency & Account transfer statistics	B
MakeTransferLogRecord	32005	Currency & Account transfer statistics	B
Payments		Teller-less Payment activity	
MakePaymentLogRecord	32007	Single & recurring payments	B
Payee Record Types		Customer Payee Change Activity	
AddPayeeLogRecord	32015	Payee Functions	B
DeletePayeeLogRecord	32018	Payee Functions	B
SeePayeeLogRecord	32016	Payee Functions	B
ChangePayeeLogRecord	32017	Payee Functions	B
Recurring Payments		Recurring Payments	
CancelRecurringPmtLogRecord	32014	Single & recurring payments	B
ChangeRecurringPmtLogRecord	32013	Single & recurring payments	B
SeeRecurringPmtLogRecord	32012	Single & recurring payments	B
SetupRecurringPmtLogRecord	32011	Single & recurring payments	B
Future Payments Types		Future Payments	
CancelFuturePmtLogRecord	32010	Add/Delete of payment exchange	B
ChangeFuturePmtLogRecord	32009	Add/Delete of payment exchange	B
SeeFuturePmtLogRecord	32008	Add/Delete of payment exchange	B

Fig. 19

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		12/1998	11/1998	10/1998	09/1998	08/1998	07/1998
168 —	Continuously Active						
170 —	First Time Active						
172 —	Resumed Active						
174 —	1-Month Inactive						
176 —	2-Month Inactive						
178 —	No Longer Active						
180 —	Total Number of Active Users						
182 —	Total Number of Users						

118

Note: Total Number of Active Users is the sum of the first 3 rows of a column; Total Number of Users is the sum of the first 6 rows.

Fig. 20

184

Day	Valid Sessions	Sessions w/Sign-off		Sessions w/Timeout		Sessions w/other end	
		186 Count	188 % of All	190 Count	192 % of All	194 Count	196 % of All
1							
2							
3							
4							
5							
6							
7							
Totals							

120

Fig. 21

09736760-124300

200

Day	Valid Sessions	Sessions w/o error		Sessions w/FEP errors		Sessions w/other errors	
		202 Count	204 % of All	206 Count	208 % of All	210 Count	212 % of All
1							
2							
3							
4							
5							
6							
7							
Totals							

122

Fig. 22

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214	216	218	220	222
Action Code	Description	Count	% of All	Users
888888				
222222				
333333				
111				
55				
65555				
777				
Totals				

122

Fig. 23

09736760-121300

	12/1998	11/1998	10/1998
Number of attempts			
Number of good completions			
Number of Users			
FX accepted			
FX declined			
Confirmation declined			
Immediate			
Future - within 1 week			
Future - within 1 month			
Future - within 1 year			
Source Product Type - Checking			
Source Product Type - Savings			
Source Currency - USD			
Source Currency - DEM			
Destination Product Type - Checking			
Destination Product Type - Savings			
Destination Product Type - Credit Card			
Destination Product Type - Loan			
Destination Currency - USD			
Destination Currency - DEM			
Amount Input Type - no choice			
Amount Input Type - credit			
Amount Input Type - debit			
Amount < 100			
Amount is from 100 to 1000			
Amount is greater than 1000			

Fig. 24

230

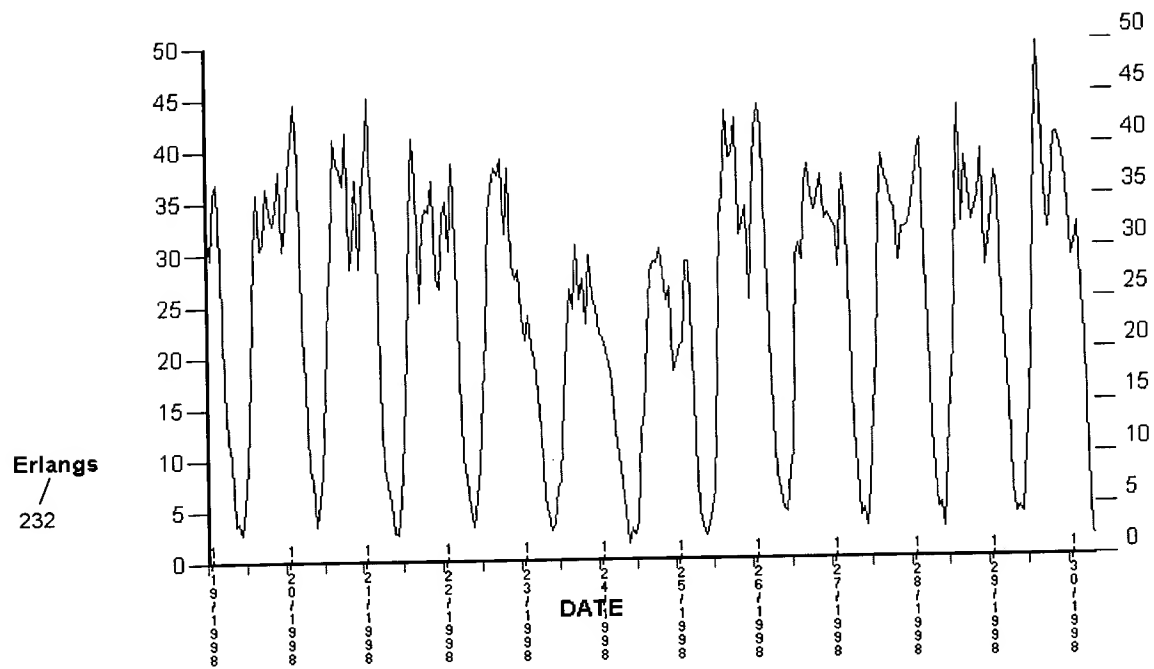


Fig. 25